Special Issue

Antimicrobial Metabolites: Discovery, Biosynthesis, High-Yield Production and Antimicrobial Mechanisms

Message from the Guest Editors

Antimicrobial resistance has emerged as one of the most pressing global health challenges of our time, posing a significant threat to human health and healthcare systems worldwide. The discovery and development of novel antimicrobial agents require the utmost urgency. Antimicrobial metabolites, natural compounds produced by various organisms, hold great promise in the fight against antimicrobial resistance. These metabolites have diverse chemical structures and unique modes of action, offering potential solutions to combat resistant pathogens. Topics include, but are not limited to, the following:

- Discovery of antimicrobial metabolites from diverse sources.
- Biosynthetic and metabolic pathways of antimicrobial metabolites.
- High-yield production strategies, including strain engineering and fermentation optimization.
- Analysis of the mechanism of antimicrobial metabolites.

Keywords: natural product; peptide; antibacterial; antifungal; antiviral; biosynthesis; high-yield production; antimicrobial mechanism

Guest Editors

Prof. Dr. Xuekui Xia

Biology Institute, Qilu University of Technology (Shandong Academy of Sciences), Jinan 250103, China

Prof. Dr. Chengwei Liu

Key Laboratory for Enzyme and Enzyme-Like Material Engineering of Heilongjiang, College of Life Science, Northeast Forestry University, Harbin 150040, China

Deadline for manuscript submissions

1 March 2026

Fermentation

an Open Access Journal by MDPI

Impact Factor 3.3
CiteScore 5.7

mdpi.com/si/242017

Fermentation
Editorial Office
MDPI, Grosspeteranlage 5
4052 Basel, Switzerland
Tel: +41 61 683 77 34
fermentation@mdpi.com

mdpi.com/journal/fermentation

Fermentation

an Open Access Journal by MDPI

Impact Factor 3.3
CiteScore 5.7

mdpi.com/journal/fermentation

MDPI

About the Journal

Message from the Editor-in-Chief

Welcome to a new open access journal, Fermentation, which meets the growing need for a high quality peerreviewed international journal with easy access to all researchers globally. We hope that you will share our enthusiasm for this new journal and look forward to working with you to make Fermentation a leader in its field. Your contributions are vital for the success of this new journal. Proposals for editing a special issue for a particular topical area are always welcome.

Editor-in-Chief

Prof. Dr. Christian Kennes
Department of Chemical Engineering, Faculty of Sciences, University of La Coruña, La Coruña, Spain

Author Benefits

High Visibility:

indexed within Scopus, SCIE (Web of Science), PubAg, FSTA, Inspec, CAPlus / SciFinder, and other databases.

Journal Rank:

JCR - Q2 (Biotechnology and Applied Microbiology) / CiteScore - Q1 (Plant Science)

Rapid Publication:

manuscripts are peer-reviewed and a first decision is provided to authors approximately 15.5 days after submission; acceptance to publication is undertaken in 3.9 days (median values for papers published in this journal in the first half of 2025).